

**Downeast Woodcrafters  
Somerset County  
Madison, Maine  
A-316-71-G-R**

**Departmental  
Findings of Fact and Order  
Air Emission License**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

**A. Introduction**

Downeast Woodcrafters (DEW) located in Madison, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their wood sawing and drying facility.

**B. Emission Equipment**

The following equipment is addressed in this air emission license:

**Fuel Burning Equipment**

<b><u>Equipment</u></b>	<b><u>Maximum Capacity (MMBtu/hr)</u></b>	<b><u>Maximum Firing Rate</u></b>	<b><u>Fuel Type, % sulfur</u></b>	<b><u>Stack #</u></b>
Boiler #1	10.2	0.9 ton/hr	wood, n/a	1
Boiler #2	1.1	8 gal/hr	#2 fuel oil, 0.5%	2

**Process Equipment**

<b><u>Equipment</u></b>	<b><u>Production Rate</u></b>	<b><u>Pollution Control Equipment</u></b>
Wood Hogg	n/a	Cyclone/baghouse
Classifier/chipper	n/a	Cyclone/baghouse
Drying Kilns (5)	2,340,000 bf/year total	none
Finishing operations	n/a	none

**C. Application Classification**

The application for DEW does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only and has been processed through Chapter 115 of the Department's regulations.

**II. BEST PRACTICAL TREATMENT (BPT)**

**A. Introduction**

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

**B. Boiler #1**

DEW operates Boiler #1 for process steam. Boiler #1 has a maximum heat input of 10.2 MMBtu/hr firing wood. Boiler #1 is equipped with a multicyclone fly-ash separator. Boiler #1 also operates an automatic fuel feed system.

The previous license for DEW set emission limits for Boiler #1 based on EPA's AP-42 emission factors. These emission factors have since been updated. The changes to DEW's emission limits are due to these changes in EPA's emission factors and do not represent any changes in operations.

Boiler #1 was installed prior to 1989 and is therefore not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BPT analysis for Boiler #1 (10.2 MMBtu/hr) is the following:

1. The total fuel use for the facility shall not exceed 2,500 ton/year (12-month rolling total) of wood based on a moisture content of 40%.
2. DEW shall use the following formula, when necessary, to convert fuel use records to 40% moisture:

$$\text{Tons Wood at 40\%} = (\text{Tons Wood at M\%}) \times [(100-M)/60]$$

where M = the moisture content of the actual wood fired

3. Chapter 103 regulates PM emission limits. The PM<sub>10</sub> limits are derived from the PM limits.
4. SO<sub>2</sub>, NO<sub>x</sub>, CO, and VOC emission limits are based upon AP-42 data dated 9/03.
5. Visible emissions from the Boiler #1 shall not exceed 30% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

**C. Boiler #2**

Boiler #2 is a #2 fuel oil fired boiler used to augment steam supply to the facility when needed.

Boiler #2 has a maximum heat input of 1.1 MMBtu/hr, and is therefore not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BPT analysis for Boiler #2 (1.1 MMBtu/hr) is the following:

1. The total fuel use for Boiler #2 shall not exceed 35,000 gal/year of #2 fuel oil, based on a 12 month rolling total, with a maximum sulfur content not to exceed 0.5% by weight.
2. Chapter 106 regulates fuel sulfur content, however in this case a BPT analysis for SO<sub>2</sub> determined a more stringent limit of 0.5% was appropriate and shall be used.
3. The PM and PM<sub>10</sub> limits are derived from Chapter 103.
4. NO<sub>x</sub> emission limits are based on data from similar #2 fired boilers of this size and age.
5. CO and VOC emission limits are based upon AP-42 data dated 9/98.
6. Visible emissions from the Boiler #2 shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block averages in a continuous 3-hour period.

**D. Process Equipment**

DEW operates sawing and milling equipment for the wood products. The wood hogg and the classifier/chipper meet the requirements of BPT through the use of cyclones and baghouses to control PM emissions. This equipment shall be maintained in good working order and operated at all times the wood hogg and classifier/chipper are in operation.

DEW uses various coatings in its finishing operations. BPT for this equipment is limiting the emission of VOC from these operations to 5.0 ton/year.

DEW will also operate five drying kilns. This equipment will be used to dry lumber at the facility at an approximate finished production rate of 2,340,000 board feet per year.

**E. Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour.

**F. Annual Emissions**

DEW shall be restricted to the following annual emissions, based on a 12 month rolling total:

**Total Licensed Annual Emission for the Facility  
Tons/year  
(used to calculate the annual license fee)**

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Boiler #1	8.1	8.1	0.3	6.6	8.1	0.2
Boiler #2	0.3	0.3	1.2	0.7	0.1	0.1
Kilns	--	--	--	--	--	1.5
Finishing	--	--	--	--	--	5.0
<b>Total TPY</b>	<b>8.4</b>	<b>8.4</b>	<b>1.5</b>	<b>7.3</b>	<b>8.2</b>	<b>6.8</b>

### **III.AMBIENT AIR QUALITY ANALYSIS**

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

<b><u>Pollutant</u></b>	<b><u>Tons/Year</u></b>
PM	25
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	100
CO	250

Based on the above total facility emissions, DEW is below the emissions level required for modeling and monitoring.

### **ORDER**

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-316-71-G-R subject to the following conditions:

### **STANDARD CONDITIONS**

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).

- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [MEDEP Chapter 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [MEDEP Chapter 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [MEDEP Chapter 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [MEDEP Chapter 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [MEDEP Chapter 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [MEDEP Chapter 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [MEDEP Chapter 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [MEDEP Chapter 115]

- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    - 2. pursuant to any other requirement of this license to perform stack testing.
  - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - C. submit a written report to the Department within thirty (30) days from date of test completion.
- [MEDEP Chapter 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- [MEDEP Chapter 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [MEDEP Chapter 115]

- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [MEDEP Chapter 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [MEDEP Chapter 115]

**SPECIFIC CONDITIONS**

**(16) Boiler #1**

- A. Total fuel use for Boiler #1 shall not exceed 2,500 tons/yr at 40% moisture (or equivalent) of wood. Records of annual fuel use shall be kept on a 12-month rolling total basis. [MEDEP Chapter 115, BPT]
- B. DEW shall continuously operate the multicyclone fly-ash separator on the emissions from Boiler #1 whenever Boiler #1 is in operation. [MEDEP Chapter 115, BPT]
- C. Emissions shall not exceed the following:

<b>Emission Unit</b>	<b>Pollutant</b>	<b>lb/MMBtu</b>	<b>Origin and Authority</b>
Boiler #1	PM	0.60	MEDEP Chapter 103

- D. Emissions shall not exceed the following [MEDEP Chapter 115, BPT]:

<b>Emission Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Boiler #1	6.12	6.12	0.26	5.00	6.12	0.17



- E. Visible emissions from Boiler #1 shall not exceed 30% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [MEDEP Chapter 101]

**(17) Boiler #2**

- A. Total fuel use for Boiler #2 shall not exceed 35,000 gal/yr of #2 fuel oil with a maximum sulfur content not to exceed 0.5% by weight. Compliance shall be demonstrated by fuel records from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. Records of annual fuel use shall be kept on a 12-month rolling total basis. [MEDEP Chapter 115, BPT]
- B. Emissions shall not exceed the following [MEDEP Chapter 115, BPT]:

<b>Emission Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Boiler #2	0.13	0.13	0.55	0.33	0.04	0.01

- C. Visible emissions from Boiler #2 shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block averages in a continuous 3-hour period. [MEDEP Chapter 101]

**(18) Process Equipment**

- A. Wood Hogg and Classifier/Chipper
1. DEW shall maintain and operate the PM control equipment, cyclone/baghouse, at all times this equipment is in operation. [MEDEP Chapter 115, BPT]
  2. Visible emissions from the cyclone/baghouse shall not exceed 10% opacity based on a six (6) minute block average basis. [MEDEP Chapter 115, BPT]
  3. DEW shall maintain a log documenting all baghouse maintenance to include all bag failures and the corrective actions taken. [MEDEP Chapter 115, BPT]
- B. Drying Kilns
1. DEW shall not exceed the processing of more than 2.34 million board feet per year through the kilns. Monthly records of the quantity and type of wood dried in each kiln shall be maintained. [MEDEP Chapter 115, BPT]
  2. Visible emissions from the drying kilns shall not exceed 20% opacity based on a six (6) minute block average basis, except for no more than one (1) six (6) minute block in any one-hour period. [MEDEP Chapter 101]

- C. VOC emissions from finishing operations
1. DEW shall maintain monthly records of the quantity of each coating consumed as well as the VOC content by weight for each applicable coating. [MEDEP Chapter 115, BPT]
  2. VOC emissions from the finishing operations shall not exceed 5.0 tpy (based on a 12 month rolling total). [MEDEP Chapter 115, BPT]
- (19) **Fugitive Emissions**  
Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour. [MEDEP Chapter 101]
- (20) **General Process Sources**  
Visible emissions from any general process source shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [MEDEP Chapter 101]
- (21) DEW shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 MRSA §605).

**(22) Payment of Annual License Fee**

DEW shall pay the annual air emission license fee within 30 days of November 30<sup>th</sup> of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2005.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R. GALLAGHER, COMMISSIONER

**The term of this license shall be five (5) years from the signature date above.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 2/15/05

Date of application acceptance: 2/17/05

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Lynn Ross, Bureau of Air Quality.